

REMARKS/ARGUMENTS

Claim Rejections – 35 U.S.C. § 102 and 103

In paragraph 1 of the Office action, claims 1, 4, 6-8, 11, and 16 are rejected under 35 U.S.C. § 102(e) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as being obvious in view of Hafer et al. (US 7,386,341) hereinafter “Hafer.” In response, independent claim 1, the only independent claim in the application, has been amended to overcome the grounds of rejection.

Claim 1 has been amended to recite “said end cap having an outer diameter no greater than an inner diameter of said tube.” Support for the amendment may be found in the application as filed at, for example, paragraph [0057] of Published Application No. 2004/021029 which provides in part:

For example, the end of the reinforcement member 34 that is attached to the conductive cap 31 may be inserted into the tube 42 and aligned such that a portion of the conductive end cap 31 extends out of the distal tip 30'. The conductive end cap 31 can then be attached to the tube 42 at the distal tip 30' such that the end cap 31 closes the distal tip 30'.

Such an insertion and positioning would not be possible if the outer diameter of the end cap was larger than the inner diameter of the tube. See also the dimensions set forth in FIGS. 5A, 5B, 6A, and 6B.

The amendment to claim 1 overcomes the 35 U.S.C. § 102 anticipation rejection based on Hafer. Claim 1 recites that the dome-shaped conductive end cap closes the open distal tip of the tube. That language defines over the open-tipped embodiments of Hafer. Claim 1 has been amended to recite that the end cap has an outer diameter no greater than an inner diameter of the tube. That language defines over the closed-ended embodiments of Hafer. Applicant respectfully requests that the 35 U.S.C. § 102 rejection of claim 1 as being anticipated by Hafer be withdrawn.

The amendment to claim 1 is also believed to overcome the 35 U.S.C. § 103 rejection based on Hafer. The examiner has not identified any embodiments in Hafer in which the end cap

has an outer diameter no greater than an inner diameter of the tube. Therefore, combinations of the various embodiments of Hafer cannot result in an apparatus containing a limitation not taught by Hafer. For the foregoing reason, applicant respectfully requests that the 35 U.S.C. § 103 rejection of claim 1 as being obvious in view of Hafer be withdrawn.

In further support of the non-obviousness of claim 1, applicant submits the Declaration of David Graner. Mr. Graner's credentials are set forth in paragraphs 1-6 of his declaration and establish that Mr. Graner is a person of at least ordinary skill in the art.

In paragraph 9 of the declaration, Mr. Graner disagrees with the position of the Office that "it would have been obvious to one of ordinary skill in the art at the time of invention to combine the embodiments to modify the end cap shown in Fig. 10 [of Hafer] to a dome shape as shown in fig. 3 [of Hafer] since the combination is a predictable variation."

The Graner declaration establishes that the embodiments of Fig. 3 and Fig. 10 of Hafer are not predictable variations for two reasons. First, using a dome-shaped end cap provides a very small contact area between the end cap and the tube. See Graner declaration, paragraphs 11, 12.

A second reason for not using a dome-shaped end cap in a closed-ended catheter is that the force exerted by fluid pressure in the catheter is opposite to the adhesion forces holding the distal tip onto the end face of the tube. Such constant opposing force would lead one away from such a configuration. See Graner declaration, paragraph 13.

The Graner declaration continues in paragraphs 14-17 to discuss how the T-shaped end cap embodiment of Hafer's closed-ended catheter as shown in Fig. 10C of Hafer overcomes the problems associated with using a dome-shaped end cap in a closed-ended embodiment. First, the stem portion of the "T" greatly increases the contact area between the distal tip and the tube. Secondly, the adhesion forces holding the distal tip to the inside wall of the tube are orthogonal to the force exerted by the fluid pressure in the catheter. As stated by Mr. Graner in paragraph 18 of his declaration, the dome-shaped distal tip is not a predictable variation for use in a closed-ended catheter.

It is applicant's position that the Graner declaration provides a factual basis for concluding that it would not have been obvious to a person of ordinary skill in the art to use an end cap from an open-ended embodiment in place of an end cap for a closed-ended embodiment. For that reason, applicant respectfully requests that the 35 U.S.C. § 103 rejection of claim 1 as being obvious in view of Hafer be withdrawn.

Claims 2-17 depend either directly or indirectly from claim 1. Applicant chooses at this time not to argue separately the patentability of those claims. Applicant reserves the right to argue the patentability of those claims at a later date should that become necessary.

New claims 60-75 have been added. New claim 60 corresponds substantially to cancelled claim 34. However, claim 60 has been rewritten so as to be a dependent claim, depending from claim 1. Claims 61-75 depend indirectly on claim 1. As a result, entry of new claims 60-75 is believed to be in compliance with the restriction requirement issued earlier in the prosecution of this application.

Applicant has made a diligent effort to place claims 1-17 and 60-75 in condition for allowance. If the examiner is of the belief that the instant application is in condition for disposition other than through allowance, the examiner is respectfully requested to contact applicant's attorney at the number listed below so that additional amendments may be considered.

Respectfully submitted,



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